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## NOTICE OF ALLOWANCE AND FEE(S) DUE

5514 7590 10/03/2008  
FITZPATRICK CELLA HARPER & SCINTO  
30 ROCKEFELLER PLAZA  
NEW YORK, NY 10112

EXAMINER	
IOYARTO, CAROLYN	
ART UNIT	PAPER NUMBER

2884  
DATE MAILED: 10/03/2008

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,349	04/18/2006	Takamasa Ishii	03500.103615.	7209

TITLE OF INVENTION: RADIATION IMAGE PICK-UP DEVICE AND METHOD THEREFOR, AND RADIATION IMAGE PICK-UP SYSTEM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	01/05/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE** OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

## HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

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5514 7590 10/03/2008

**FITZPATRICK CELLA HARPER & SCINTO**  
30 ROCKEFELLER PLAZA  
NEW YORK, NY 10112

## **Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

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10/576,349	04/18/2006	Takamasa Ishii	03500.103615.	7209

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nonprovisional	NO	\$1510	\$300	\$0	\$1810	01/05/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
IGYARTO, CAROLYN	2884	250-370110

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY AND STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 48 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 48 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

# Notice of Allowability

## Application No.

10/576,349

## Examiner

CAROLYN IGYARTO

## Applicant(s)

ISHII ET AL.

## Art Unit

2884

### - The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 29 July 2008.
2. ☒ The allowed claim(s) is/are 1-15 and 17-19.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 7/29/2008
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 29 July 2008 has been entered. Accordingly, changes have been made to the specification. Claims 1-15 and 17-19 have been amended. Claim 16 has been cancelled. No new claims have been added. Thus, claims 1-15 and 17-19 are currently pending in this application.

2. In view of Applicant's remarks and amendment, received 29 July 2008, the previous objections made to the specification, drawings, and claims have been withdrawn.

3. In view of the amendment, received 29 July 2008, the previous rejections made under 35 USC 112 have been withdrawn.

***Information Disclosure Statement***

4. The information disclosure statement submitted on 19 July 2008 has been considered by the Examiner and made of record in the application file.

***Response to Arguments***

5. In view of the Examiner's Amendment below Applicants arguments, received 29 July 2008, are persuasive and the previous rejections to claims 1-15 and 17-19 are withdrawn.

**EXAMINER'S AMENDMENT**

6. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Leonard P. Diana (Re. No. 29,296) on 25 September 2008.

The application has been amended as follows:

**Claim 1:** A radiation image pick-up device comprising:

a plurality of pixels disposed in a matrix, each of the pixels including a photoelectric conversion element for converting incident radiation into electric charges;

a scanning circuit for scanning said pixels;

a signal output circuit for outputting signals from said pixels; and

a plurality of signal reading wirings through which said pixels and said signal output circuit are electrically connected to each other, a respective ~~[[one]]~~ first and second of said signal reading wirings being provided for each row of the pixels arranged along a first direction of the matrix,

wherein each of said pixels includes a plurality of semiconductor elements including a first semiconductor element and a second semiconductor element, the first semiconductor element being electrically connected to a respective one ~~the first~~ of said signal reading wirings and the second semiconductor element being electrically connected to the second of said signal reading wirings,

wherein said first and second semiconductor elements are ~~independently selectable~~ is selected by means of said scanning circuit according to a radiographing mode that is being used, and

wherein the first and second of said signal reading wirings through which said first and second semiconductor elements are ~~[[is]]~~ electrically connected are ~~independently selectable~~ is selected based on an actuation of said semiconductor element.

**Claim 4:** A radiation image pick-up device according to claim 3, wherein at least one of said plurality of semiconductor elements is a source follower.

**Claim 8:** A radiation image pick-up method comprising:

using a device which includes

a plurality of pixels disposed in a matrix, each of the pixels including at least one photoelectric conversion element for converting incident radiation into electric charges,

a scanning circuit for scanning the pixels,

a signal output circuit for outputting signals from the pixels, and

a plurality of signal reading wirings through which the pixels and the signal output circuit are electrically connected to each other, arranged such that ~~each a~~ first and second signal reading wiring correspond[[s]] to a respective row of the pixels arranged along a first direction of the matrix,

wherein each of the pixels includes a plurality of semiconductor elements, such that a first semiconductor element is electrically connected to the first signal reading wiring and a second semiconductor element is electrically connected to a ~~respective one of the~~ second signal reading wiring[[s]],

wherein independent selection of the first and second semiconductor elements is effected by the scanning circuit in such manner as to select the corresponding signal reading wiring for use from the plurality of signal reading wirings connecting that pixel with the signal output circuit, according to a radiographing mode that is being used.

**Claim 11:** A radiation image pick-up method according to claim 9, wherein each of said pixels includes semiconductor elements electrically connected through each of said signal reading wirings, and at least one of the semiconductor elements is a source



follower, and the scanning circuit operates the semiconductor elements such that, when the dosage of the radiation is small in the radiographing, the signal reading wiring connected to the source follower is selected.

**Claim 12:** A radiation image pick-up system, comprising:

a radiation image pick-up device comprising a plurality of pixels disposed in a matrix, each of the pixels including a photoelectric conversion element for converting incident radiation into electric charges; a signal output circuit for outputting signals from said pixels; and wherein a plurality of signal reading wirings through which said pixels and said signal output circuit are electrically connected to each other are provided for each pixel and each of the pixels includes a plurality of semiconductor elements electrically connected to a respective one of said signal reading wirings, a respective ~~[[one]]~~ first and second of said signal reading wirings being provided for each row of the pixels arranged along a first direction of the matrix, and said plurality of semiconductor elements includes a first semiconductor element and a second semiconductor element, wherein the first semiconductor element is electrically connected to the first of said signal reading wirings and the second semiconductor element is electrically connected to the second of said signal reading wirings.

radiation generation means for applying radiation;

selection means for selecting any one of a plurality of radiographing modes of said radiation image pick-up device according to magnitude of a dosage of radiation; and

control means for controlling the application of the radiation by said radiation generation means and drive of said radiation image pick-up device based on the selection by said selection means,

wherein each of said semiconductor elements is selected by means of said control means, and

the signal reading wiring through which said semiconductor elements are ~~[[is]] electrically connected are independently selectable is selected~~ based on the operation of said semiconductor element by said control means.

**Claim 19:** A radiation image pick-up device according to claim 4, wherein said scanning circuit said semiconductor elements such that, when the dosage of the radiation is small in a radiographing performed using said device, said signal reading wiring connected to said source follower is selected.

***Allowable Subject Matter***

7. Claims 1-15 and 17-19 are allowed.

8. The following is an examiner's statement of reasons for allowance:

With respect to claims 1-7, 15, and 17-19 the prior art of record does not disclose or reasonably suggest, along with the other claimed limitations, a radiation image pick-up device comprising: namely, wherein the first and second of said signal reading wirings through which said first and second semiconductor elements are electrically connected are independently selectable based on an actuation of said semiconductor element.

With respect to claims 8-11 the prior art of record does not disclose or reasonably suggest, along with the other claimed limitations, a radiation image pick-up method comprising: namely, wherein independent selection of the first and second semiconductor elements is effected by the scanning circuit in such manner as to select the corresponding signal reading wiring for use from the plurality of signal reading wirings connecting that pixel with the signal output circuit, according to a radiographing mode that is being used.

With Respect to claims 12-14 the prior art of record does not disclose or reasonably suggest, along with the other claimed limitations, a radiation image pick-up system comprising: namely, the signal reading wiring through which said semiconductor elements are electrically connected are independently selectable is selected based on the operation of said semiconductor element by said control means.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CAROLYN IGYARTO whose telephone number is (571)270-1286. The examiner can normally be reached on Monday - Thursday, 7:30 A.M. to 5 P.M. E.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CI  
/David P. Porta/  
Supervisory Patent Examiner, Art Unit 2884